

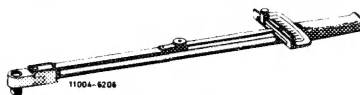
## 03—350 Removal and installation of crankshaft sprocket

### Tightening torques

	Nm
Bolt M 18 x 1.5 x 45 to crankshaft	270—330
Nuts for cylinder head cover	15
Oil pan upper half to cylinder crankcase	10
Oil pan lower half to upper half	
Engine carrier to engine mount front	70
Necked-down screw for camshaft sprocket	80

### Special tools

Torque wrench 150—500 Nm  
3/4" square



001 589 31 21 00

Socket 27 mm, 1/2" square



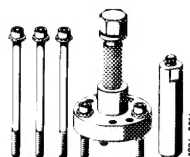
001 589 65 09 00

Detent



110 589 00 40 00

Puller for balancing disc



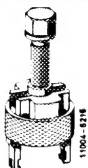
116 589 10 33 00

Puller for spacing ring



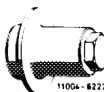
616 589 00 33 00

Puller for crankshaft sprocket



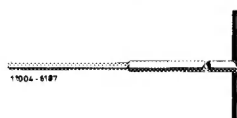
615 589 01 33 00

Installer for radial sealing ring



130 589 00 61 00

Screwdriver (Allen wrench) with tommy handle for  
hex. socket screws 5 mm, 300 mm long.



116 589 02 07 00

Knocking-out mandrel

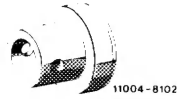


110 589 02 15 00

Knocking-in mandrel for oil  
dipstick guide tube



117 589 00 31 00



## Conventional tools

Engine hoist (Motordirigent) size 1.5

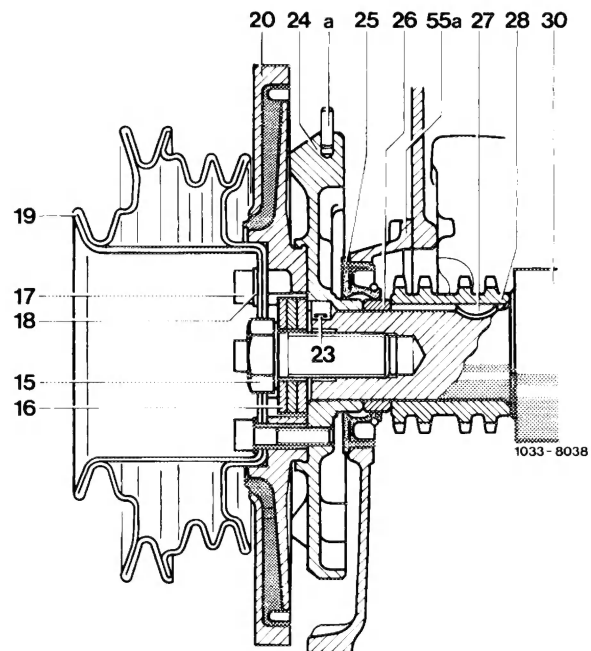
e.g. made by Bäcker, D-5630 Remscheid  
order no. 3178

Adaptor 3/4" square socket to  
1/2" square head

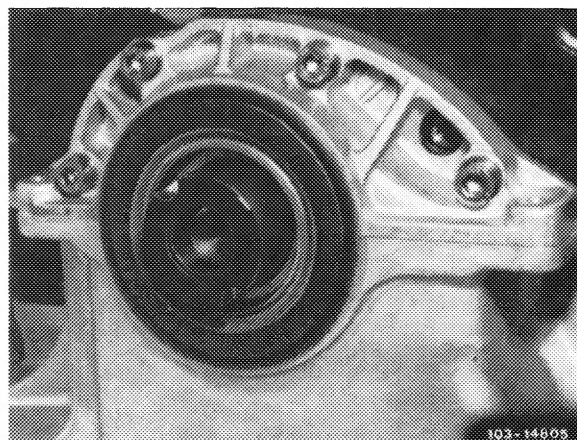
e.g. made by Hazet, D-5630 Remscheid  
order nor. 1058 R-1

## Removal

- 1 Remove radiator and fan.
- 2 Remove pulley, vibration damper and balancing disc (03-340).
- 3 Completely remove oil pan (01-310).  
On model 126.120, remove engine.



- 4 Remove front crankshaft radial sealing ring (03-324).
- 5 Remove front cylinder crankcase housing cover (01-215).

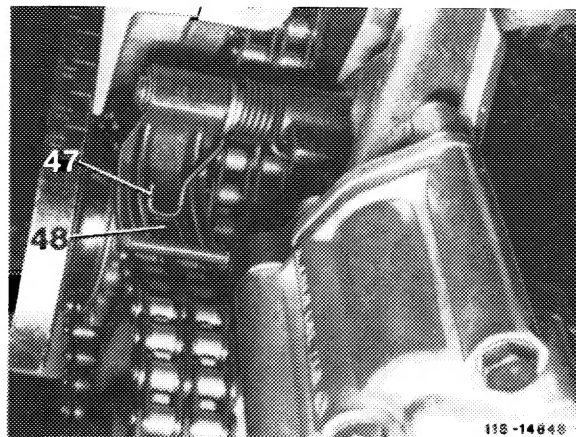


6 Unscrew fastening screw (56) of oil pump sprocket (Fig. item 9).

7 Remove torsion spring (47) from clamp (48) toward the rear.

8 Turn clamp in upward direction.

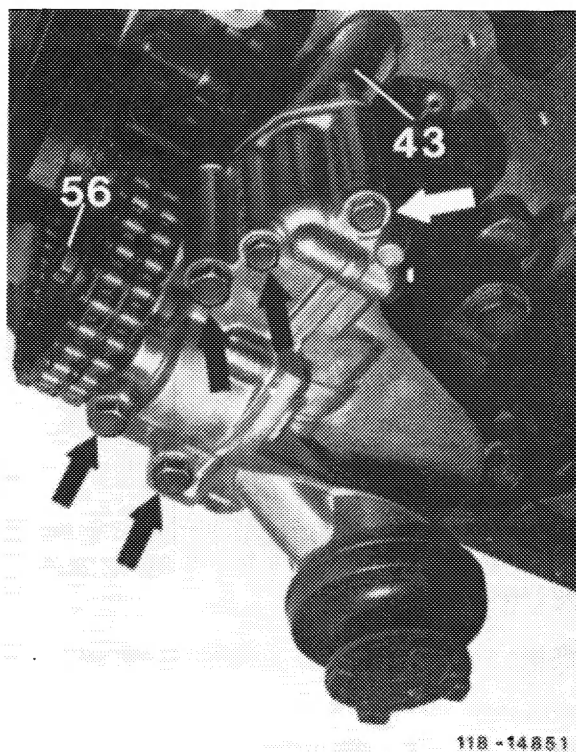
47 Torsion spring  
48 Clamp



9 Remove sprocket by means of two screw-drivers.

10 Remove sprocket.

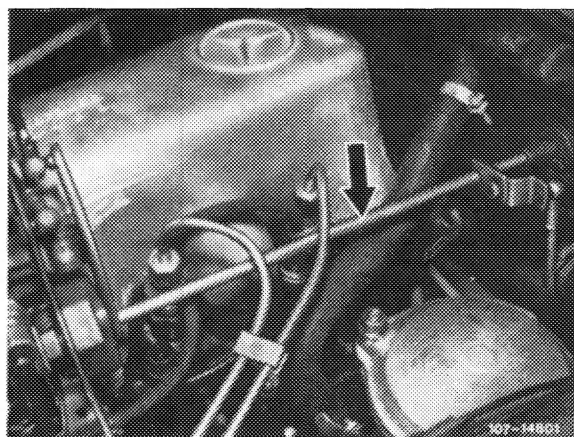
11 Remove double roller chain of oil pump.



43 Flange member  
56 Fastening bolt

12 Disconnect regulating linkage to remove cylinder head cover. Pull out locking eye of longitudinal regulating shaft (arrow).

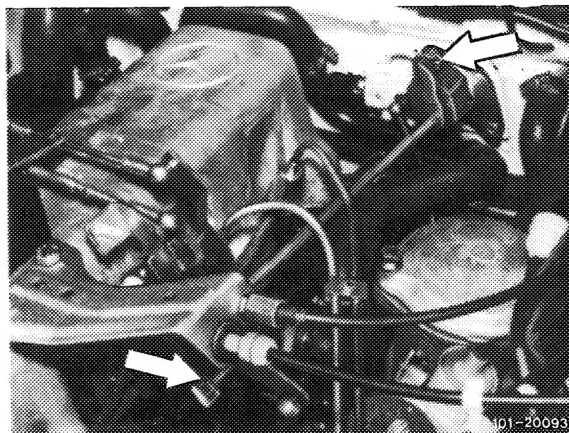
On models 116.120 and 123, pull longitudinal regulating shaft out of rubber mount in forward direction and remove in rearward direction.



Model 116.120

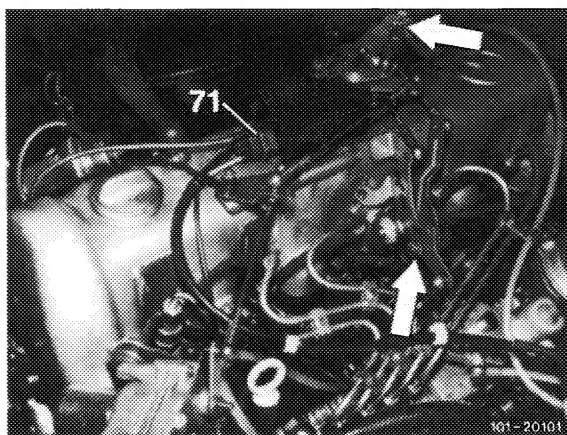
On model 126.120, pull longitudinal regulating shaft out of guide lever in rearward direction and remove in forward direction.

Model 123



On models 123 with automatic transmission 722.303 (W4A 040) and 126.120, pull out central plug for vacuum lines (71) or vacuum lines. Disconnect bowden wire, compress black plastic clip (arrow) and pull bowden wire out of holder in rearward direction.

Model 126.120

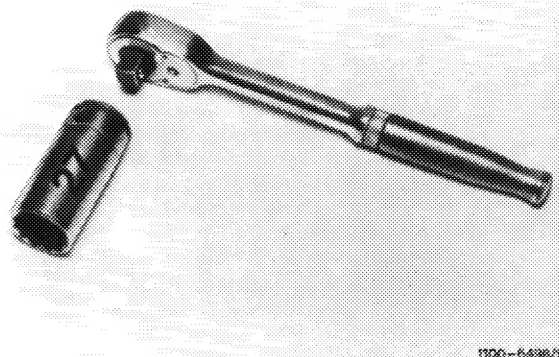


13 Set engine to TDC of 1st cylinder. For this purpose, screw bolt M 18 x 1.5 x 45 with cup washers into crankshaft.

Rotate engine with tool combination at crankshaft.

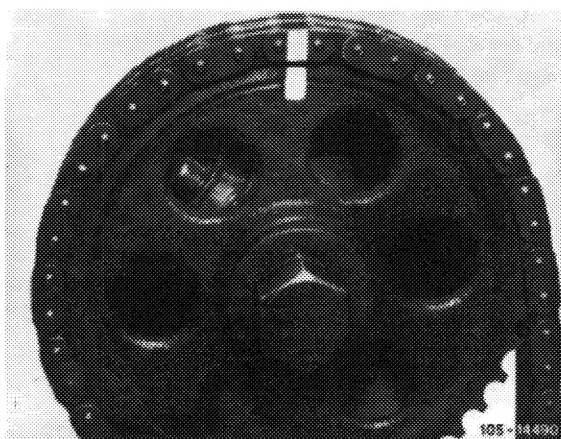
**Attention!**

Rotate crankshaft only in direction of rotation of engine.



14 Mark camshaft and crankshaft sprocket with paint in relation to timing chain.

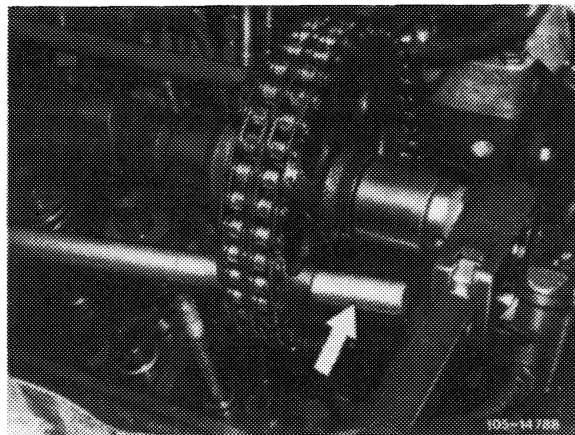
15 Remove chain tensioner (05-310).



**16 Remove camshaft sprocket.**

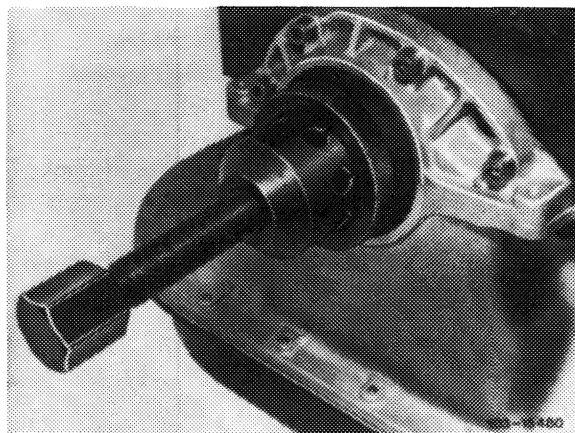
To loosen necked-down screw, apply counterhold to camshaft sprocket by means of a screwdriver or steel bolt, loosen holder for fuel lines and swivel sideways.

**17 Remove timing chain from teeth of crankshaft sprocket.**

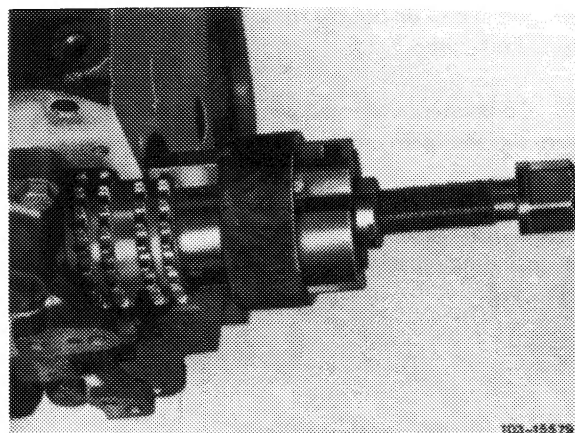


**18 Unscrew bolt M 18 x 1.5 x 45.**

**19 Pull off spacing ring by means of puller.**



**20 Pull off crankshaft sprocket by means of puller.**



### **Installation**

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**21 Transfer color mark from old crankshaft sprocket to new sprocket.**

**22 Heat crankshaft sprocket on a hot plate (approx. 80 °C) and slip on crankshaft.**



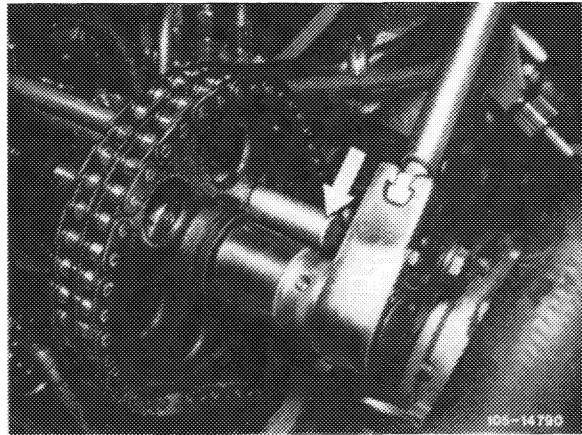
23 Knock spacing ring on crankshaft.

24 Insert timing chain and place camshaft sprocket on camshaft. Pay attention to color code.

25 Position necked-down screw for attaching camshaft sprocket and tighten to 80 Nm. For this purpose, apply counterhold to camshaft sprocket by means of a screwdriver or steel bolt.

26 Place double roller chain of oil pump on crankshaft sprocket.

27 Place oil pump sprocket into double roller chain and then slip on drive shaft. Screw-in fastening screw.



28 Set clamp on double roller chain and torsion spring on clamp.

29 Completely install oil pan. For centering of oil pan, slip sleeve on crankshaft journal.

30 Coat front cylinder crankcase housing cover on flange surfaces with sealing compound and position against cylinder crankcase. Screw-in oil pan bolts first (01-215).

31 Install front crankshaft radial sealing ring (03-324).

32 Install pulley, vibration damper and balancing disc (03-340).

33 Rotate engine with tool combination and check adjusting marks.

34 Install chain tensioner (05-310).

35 For further installation proceed vice versa to removal.

